

Date: Sun, 28 Mar 93 20:01:30 PST
From: Info-Hams Mailing List and Newsgroup <info-hams@ucsd.edu>
Errors-To: Info-Hams-Errors@UCSD.Edu
Reply-To: Info-Hams@UCSD.Edu
Precedence: Bulk
Subject: Info-Hams Digest V93 #387
To: Info-Hams

Info-Hams Digest Sun, 28 Mar 93 Volume 93 : Issue 387

Today's Topics:

 "CB transplants"
 "Technician" class means what?
 (none)
 160-10M Nets List / Sailing Info?
 ALINCO DR-599T vs 570T
 ANS-086 BULLETINS
 ANYONE MultiOP- Single Xmter CW WPX - W8BI?
 feeding dipole with 300-ohm twinlead
 FT-101B
 How to charge Gel-Cells
 ionosphere:post nuclear strike
 Q values. (2 msgs)
 Source For spools of wire

Send Replies or notes for publication to: <Info-Hams@UCSD.Edu>
Send subscription requests to: <Info-Hams-REQUEST@UCSD.Edu>
Problems you can't solve otherwise to brian@ucsd.edu.

Archives of past issues of the Info-Hams Digest are available
(by FTP only) from UCSD.Edu in directory "mailarchives/info-hams".

We trust that readers are intelligent enough to realize that all text
herein consists of personal comments and does not represent the official
policies or positions of any party. Your mileage may vary. So there.

Date: 29 Mar 93 03:32:05 GMT
From: usc!wupost!spool.mu.edu!olivea!sgigate!odin!chuck.dallas.sgi.com!
adams@network.UCSD.EDU
Subject: "CB transplants"
To: info-hams@ucsd.edu

In article <1p002lINNk88@chnews.intel.com>, jlbromley@joshua.intel.com (James
Bromley~) writes:

...deleted

|> >Okay, here's a little quiz. How many of you *never* used a CB before

|> >becoming a ham?
|> >
|> >The rest of you, hang your heads in shame; you're "CB transplants."
|> >Yes, that includes *you*.
...deleted
+-----+-----+-----+-----+
|> | Jim Bromley W5GYJ |
|> | Intel Corp. m/s CH3-91 | Celebrating 30 years as a No-Code
Technician ...deleted

i *never* used a CB before becoming a ham!!! i became a ham just about
the time that 11 meters (when it was OUR band) was about to go over or did.
look at a Collins S310B exciter. right between 15 and 10 meters is
a ham band on it.

guess that makes me an OF!! remember the late 1950s
was the BEST sunspot peak ever.
we could work the world with 5 watts in those days, with tubes no
less hmmmmm we still can.....
i miss them old multivibrators in the trunk just humming away. :-)
that was when the PA voltage could kill. glad they're gone. too many
lawyers would get rich nowadays.

73 de k5fo chuck

dit dit

Date: 28 Mar 93 22:04:03 GMT
From: news-mail-gateway@ucsd.edu
Subject: "Technician" class means what?
To: info-hams@ucsd.edu

>I recently got my ticket, and yesterday realized that I'm not sure it's
>marked correctly. When I did the tests, I took and passed the 5wpi at
>the same time as the written elements. I was expecting a "tech+hifi"
>on my licence, but it just says "technician" on it. Is this correct or
>a mistake? Does "N8XBK" indicate anything about the class of licence
>it's good for?

jeff.....

your call indicates you have either Technician or General class privileges or
higher (you don't have to change calls when you upgrade).

there is no "Technician Plus HF" license or endorsement. The commission

decided at the time that to issue another license would mean opening up the pandora's box in their software to get another class added. There is a section in there for a 6th amateur license class but it's never been used or tested in production.

the VECs keep track of who passes the code element after earning the technician license (that requires only elements 2 and 3A) and they make this information available to the FCC's enforcement folks.

to upgrade from where you are, code or no code, you have to pass 13 WPM, so it's not important to the examiners to know if you have 5WPM credit. hang on to that certificate of successful completion -- that's the easiest way to show people you have 1A credit. (for those that came in as novices, they want to hang onto the novice license after upgrading to Tech for the same reason).

73, bill wb9ivr

Date: 28 Mar 93 23:31:16 GMT
From: news-mail-gateway@ucsd.edu
Subject: (none)
To: info-hams@ucsd.edu

ADD PATRICKF@DELPHI.COM

Date: 29 Mar 93 00:17:31 GMT
From: usc!wupost!uwm.edu!caen!msuinfo!netnews.upenn.edu!mipg.upenn.edu!yee@network.UCSD.EDU
Subject: 160-10M Nets List / Sailing Info?
To: info-hams@ucsd.edu

>Yes, the world's biggest and bestest listing of nets is in fact
>available -for free - electronically. It's the ARRL Net Directory and
>I've placed the brand new edition of it on Compuserve, America On Line,
>BIX, GEnie and the ARRL BBS (203 666 0578). The file name is most
>often 93ARRLND.zip

Can you do the same with the Repeater Directory? That way the directory can be kept more up to date.

--
411 Blockley Hall | Conway Yee, N2JWQ
418 Service Drive | yee@ming.mipg.upenn.edu (preferred)
Philadelphia, PA 19104 | cy5@cunixa.cc.columbia.edu (forwarded to above)
(215) 662-6780 |

Date: 28 Mar 93 15:45:07
From: usc!wupost!spool.mu.edu!nigel.msen.com!fmsr17!lynx.unm.edu!dns1.NMSU.Edu!
opus!forozco@network.UCSD.EDU
Subject: ALINCO DR-599T vs 570T
To: info-hams@ucsd.edu

I am considering buying either an Alinco DR-599T or a DR-570T.
I would like to hear from people who presently use one of these
rigs or who have used one in the past. Also, I would like to know
if any mods can be made to them for extended receive.

73's de Luis
--

| | | | | | |
|--------------------------|---|---|---|---|---|
| Luis F. Orozco | N | 5 | U | H | B |
| forozco@dante.nmsu.edu | | | g | o | o |
| forozco@freedom.nmsu.edu | | | l | m | y |
| | | | y | e | |

Date: 29 Mar 93 03:12:57 GMT
From: news-mail-gateway@ucsd.edu
Subject: ANS-086 BULLETINS
To: info-hams@ucsd.edu

SB SAT @ AMSAT \$ANS-086.01
STS-55/SAREX MISSION SCRUBBED

HR AMSAT NEWS SERVICE BULLETIN 086.01 FROM AMSAT HQ
SILVER SPRING, MD MARCH 27, 1993
TO ALL RADIO AMATEURS BT
BID: \$ANS-086.01

WA4SIR Provides Details About The STS-55 Launch Abort

The following is an excerpt from a message sent to the schools and members
involved in the Shuttle Amateur Radio Experiment (SAREX) from Ron Parise
(WA4SIR) about the STS-55 main engine "shut-down" 3 seconds before launch.

"At 9:51 AM this morning just 3 seconds prior to launch, the Columbia's
on-board computers performed an automatic shutdown of it's three main

engines. Preliminary analysis of the telemetry data obtained during the ignition sequence points to a faulty helium purge valve which should have closed prior to the fuel and oxidizer valves being opened. The vehicle was then safed by the launch control team and flight crew. To help you understand what actually happened let me give you a little background of the sequence of events which occur within the last 8 seconds of the count-down. At 6.8 seconds before launch (T - 6.8 sec) the general purpose computers (GPC's) start the ignition sequence for the 3 liquid fuel main engines. It takes a few seconds for them to ignite and start producing thrust. The computers give the engines until T - 3 sec to reach 90% of their thrust. At that time if there are any indications of any difficulty with any of the 3 engines then the computers will shut them all down and abort the launch. If the engines are all performing normally then the 2 solid rocket boosters are ignited at T - 0. Since the solid rocket boosters cannot be turned off once they are ignited, the computers spend the last three seconds making sure everything is exactly right before starting them. The shuttle system performed exactly as it was designed to do. It detected a problem with the number 3 main engine, and aborted the countdown at T - 3 sec just as it was supposed to."

A definitive launch date for STS-55 has not been set. This problem will most likely take on the order of 2-4 weeks to resolve. Since STS-56 uses a different launch pad, launch for this mission is still scheduled for April 7. Please watch the AMSAT News Service (ANS) for any further information concerning STS-55 and STS-56.

[The ANS would like to thank Frank Bauer (KA3HDO) of the SAREX Working Group and Ron Parise (WA4SIR) for this bulletin item.]

/EX

SB SAT @ AMSAT \$ANS-086.02
FIRST CUT ARSENE ELEMENT SET

HR AMSAT NEWS SERVICE BULLETIN 086.02 FROM AMSAT HQ
SILVER SPRING, MD MARCH 27, 1993
TO ALL RADIO AMATEURS BT
BID: \$ANS-086.02

N3FKV Provides A "First-Cut" ARSENE Orbital Element Set

At the risk of being considered presumptuous, here is an element set for ARSENE, derived from the tentative orbital plans published in the RACE report last January. To wit: Period = 17.5 Hr, Apogee = 36,000 KM, Perigee = 20,000 KM. This orbital element set does not have any relation to real time. Its purpose is to show orbital geometry only. It is quite interesting to run out over several days and see the coverage. The "Orbit-View" projection in InstantTrack is particularly helpful in understanding the dynamics of this proposed OSCAR satellite scheduled to be

launched in late May.
Satellite: Arsene
Catalog number: 00000
Epoch time: 93000.00000000
Element set: N3FKV-notional
Inclination: 0.0 deg
RA of node: 0.0 deg
Eccentricity: 0.24
Arg of perigee: 0.0 deg
Mean anomaly: 0.0 deg
Mean motion: 1.371430 rev/day
Decay rate: 0.0 rev/day^2
Epoch rev: 1

[The AMSAT News Service (ANS) would like to thank Dick Campbell (N3FKV) for this bulletin item.]

/EX

SB SAT @ AMSAT \$ANS-086.03
INSTANT TRACK UTILITIES: PART I

HR AMSAT NEWS SERVICE BULLETIN 086.03 FROM AMSAT HQ
SILVER SPRING, MD MARCH 27, 1993
TO ALL RADIO AMATEURS BT
BID: \$ANS-086.03

KB5MU Has Released A Series Of Utility Programs For InstantTrack: Part I

Paul Williamson (KB5MU) has just released a collection of small programs that may be useful to InstantTrack users. Most of the files on the Utilities Diskette are ready to use and can just be copied into the InstantTrack directory of your hard disk (usually C:\IT).

Most of the programs come with two text files. A .DOC file which contains the general documentation for the program, and a .UPD file contains the wish list, bug list, and update history for the program. To get started with one of the programs on the disk, you just read the .DOC file for that program using a text editor. You can also print the DOC file out if you wish.

Some of the programs also come with a .ZIP file which contains the source code for that program. If you're not a programmer or are not interested in modifying the program, you can safely ignore or delete the .ZIP files.

A short description of each of the programs follows:

ITPASS - InstantTrack Satellite Pass Table Generator - ITPASS outputs a table of upcoming satellite passes, giving AOS and LOS times and the

maximum elevation angle for each pass. You can specify which satellite(s) you want and how many passes to display. You can tell ITPASS to ignore short passes or low passes, or both. You can use ITPASS interactively to get a quick look at today's satellite passes. ITPASS is also designed to work with other programs to help automatically schedule your station operations.

ITSORT - An InstantTrack Keplerian Element Database Arranger - One thing that's missing from InstantTrack is a way to move satellites around in the database. ITSORT works with your familiar text editor to let you manipulate the order of InstantTrack's Keplerian Element database to suit you. It makes it easy to add, delete, sort, or rearrange satellites in the database however you like. You just run ITSORT, and it creates a text file for you to edit. Once you have the satellites arranged the way you want them in the text file, you run ITSORT again to incorporate the changes into the InstantTrack database.

/EX

SB SAT @ AMSAT \$ANS-086.04

INSTANT TRACK UTILITIES: PART II

HR AMSAT NEWS SERVICE BULLETIN 086.04 FROM AMSAT HQ

SILVER SPRING, MD MARCH 27, 1993

TO ALL RADIO AMATEURS BT

BID: \$ANS-086.04

KB5MU Has Released A Series Of Utility Programs For Instant Track: Part II

ITSTAMP - InstantTrack Timestamped Logfile Annotator - ITSTAMP is for people who are trying to analyze any kind of satellite-related log file. If you have any kind of data in an ASCII table with timestamps, and you would like to know the azimuth, elevation, and range to the satellite for each of the data points in your file, ITSTAMP is for you.

DISPANG - Display OrbitDRV Antenna Angles on Screen - If you run InstantTrack's OrbitDRV or OrbitNCP programs to drive your Kansas City Tracker (or compatible), even while not running InstantTrack itself, you may find DISPANG a convenient addition to your setup. After you install DISPANG, you'll see the azimuth and elevation of your antennas displayed in the upper right-hand corner of the computer's text screen, while you run other programs undisturbed. Versions for color and monochrome displays are provided, along with assembly language source code for your edification.

IPMDRV - KCT-compatible RotorDRV for WB5IPM Controller - In the May 1987 issue of QEX, the ARRL Experimenter's Exchange, Frank Perkins (WB5IPM) described a very simple interface for computer control of antenna rotators. The file IPMDRV.ZIP on this diskette contains software drivers for the WB5IPM interface hardware. These drivers are compatible with InstantTrack

and with OrbitDRV. Thanks to Courtney Duncan (N5BF) for donating these drivers. The drivers also come with assembly language source code, and can be used as an example if you need to create InstantTrack-compatible drivers for your own custom hardware.

Kansas City Tracker Information - Two files on the diskette contain technical information about the Kansas City Tracker. DRVSVC.DOC, provided by Brooks Van Pelt (KB2CST) specifies the defined software interface between tracking programs like InstantTrack and the KCT drivers. (See INTSPEC.TXT from your InstantTrack distribution diskette for information about which ones InstantTrack uses.) KCTHW.TXT contains some notes on exactly what hardware is on the KCT/T circuit board, in case you want to write some custom software for it.

KISS2ASC - KISS Packet Logfile to ASCII Logfile Converter - If you're active on the digital satellites, you've probably had to deal with KISS log files. A KISS log file is a binary log of every packet your TNC received during the session. Because KISS logs are binary, it can be difficult to see what's in them. KISS2ASC allows you to convert the contents of a KISS log file to readable ASCII, so you can see just what is in the log file.

KISSFILT - KISS Packet Logfile Filter - KISSFILT is another tool for dealing with KISS log files. It allows you to selectively keep or discard KISS packets from the log file, based on criteria such as the to and from callsigns in the packets. If you like to save telemetry logs, you can use KISSFILT to remove all the other chatter from your KISS logs to save space.

For more information on how you can obtain these utility programs to accompany InstantTrack, contact the AMSAT-NA office for information on the availability of the InstantTrack Utilities diskette. Our thanks to Paul for his effort in making these programs available to us.

/EX
SB SAT @ AMSAT \$ANS-086.05
AMSAT OPS NET SCHEDULE

HR AMSAT NEWS SERVICE BULLETIN 086.05 FROM AMSAT HQ
SILVER SPRING, MD MARCH 27, 1993
TO ALL RADIO AMATEURS BT
BID: \$ANS-086.05

AMSAT Operations Net Schedule

AMSAT Operations Nets are planned for the following times. Mode B Nets are conducted on A0-13 on a downlink frequency of 145.950 MHz and Mode J/L on a downlink of 435.970 MHz.

| Date | UTC | Mode | Phs | NCS | Alt NCS |
|------|-----|------|-----|-----|---------|
|------|-----|------|-----|-----|---------|

| | | | | | |
|-----------|------|---|-----|--------|--------|
| 3-Apr-93 | 2130 | B | 150 | VE2LVC | W9ODI |
| 10-Apr-93 | 2230 | B | 86 | N7NQM | W5IU |
| 19-Apr-93 | 0130 | B | 95 | WB6LLO | WA5ZIB |

Any stations with information on current events would be most welcome. Also, those interested in discussing technical issues or who have questions about any particular aspect of OSCAR statellite operations are encouraged to join the OPS Nets. In the unlikely event that either the Net Control Station (NCS) or the alternate do not call on frequency, any participant is invited to act as the NCS.

Slow Scan Television on AO-13

SSTV sessions will be held on UTC Saturdays and Sundays:

Mode J Downlink 435.980 MHz

Mode B after J Downlink 145.960 MHz

OPS NETS will take priority, look for SSTV activity immediately after the net. SSTVer's are invited to join the Net to make schedules at other times if desired.

/EX

SB SAT @ AMSAT \$ANS-086.06

PHASE-3D PROGRESS REPORT

HR AMSAT NEWS SERVICE BULLETIN 086.06 FROM AMSAT HQ

SILVER SPRING, MD MARCH 27, 1993

TO ALL RADIO AMATEURS BT

BID: \$ANS-086.06

Phase-3D Design Effort Proceeding

AMSAT Engineering Vice President Dick Jansson (WD4FAB) announces that, following the Orlando meeting, the Phase-3D design effort has been proceeding nicely.

The basic design is that which has been discussed since the meeting - a hexagonal cylinder with dimensions of 2240 mm (7.3 feet) across the points and 1120 mm (3.7 feet) across each face. The height is 675 mm (2.2 feet). Two of the faces will accommodate about half the spacecraft's compliment of solar cells. The remainder will be mounted on unfolding panels. Total weight of the satellite will be 400 kg (880 lbs). The high gain antennas will be mounted on the top, along with the motor nozzle. Initial concern that the nozzle might impair the operation of the antennas has been alleviated through computer modeling. An additional consideration, heat

from the nozzle, is not expected to present a significant problem in the design of the antennas. The reason the antennas were relocated to the nozzle side of the spacecraft is because additional height is available -- greatly facilitating antenna design.

A great deal of WD4FAB's effort, since the meeting, has been spent on structural and thermal analysis. This has led to confirmation of the general design for the cylindrical launch adaptor in which Phase 3D will ride, and a conceptual layout of the routing of heat pipes needed to cool the sunlit side of the spacecraft as well as remove heat from the high power transmitter modules. Also analyzed was the three point separation mount which will support the satellite inside the cylindrical adaptor section.

Dick now feels that these subjects are now well enough in hand to permit him to concentrate on producing specific structural design drawings. These will be used in the construction of an engineering model by mid-summer. The schedule calls for that to be followed by the fabrication of flight spaceframe beginning this fall and completed during the spring of 1994.

Keep tuned for more Phase-3D progress.

/EX

SB SAT @ AMSAT \$ANS-086.07
WEEKLY OSCAR STATUS REPORTS

HR AMSAT NEWS SERVICE BULLETIN 086.07 FROM AMSAT HQ
SILVER SPRING, MD MARCH 27, 1993
TO ALL RADIO AMATEURS BT
BID: \$ANS-086.07

Weekly OSCAR Status Reports: 27-MAR-93

AO-13:

L QST *** AO-13 TRANSPONDER SCHEDULE *** 1993 Mar 22 - May 10
Mode-B : MA 0 to MA 90 !
Mode-BS : MA 90 to MA 120 !<- Mode-S Transponder; Mode-B Transponder is ON
Mode-S : MA 120 to MA 130 !<- Mode-S Transponder; Mode-B Transponder is OFF
Mode-LS : MA 130 to MA 135 !<- Mode-S Beacon + Mode-L Transponder
Mode-JL : MA 135 to MA 150 ! Blon/Blat 180/0
Mode-B : MA 150 to MA 256 ! Move S/C attitude to 210/0 on 10-May-93

Please don't uplink to Mode-B transponder during MA 120-130. Your uplink transmissions will interfere with Mode-S users. In order to further encourage Mode-S enthusiasts and the use of the AO-13's Mode-S transponder, Mode-S is now ON for an additional 30 MA units, i.e. MA 90 to MA 135. During MA 90-120 you will have to endure the coupling from Mode-B users operating at 145.880-145.920 MHz. Either work between them, or use their

signals as test signals. MA 120-130 is Mode-S transponder exclusive (plus Mode-B beacon). MA 130-135 is Mode-S beacon (plus Mode-L transponder).
[G3RUH/VK5AGR/DB20S]

MIR: According to Sergey (RV3DR), the Mir Space QSL Manager, hams saw the following message coming from the Mir spacestation packet station:

HELLO HAM,s !!!
You can listen voice MSG space orbital station
"MIR" on 145,55 MHz at 20 and 21 MARCH.
Will work digital voice memory microphone.
Inventor - DL2MDE
Voice MSG repeat every 3 min.

Best 73 RV3DR Sergey -Space QSL manager

Later, in a message from Leo (UA3CR), he sent the following signal report from Moscow about the voice message: "Just a few minutes ago at 12:27 UTC I heard Digi-Voice message downloaded from MIR Space Station. The [message was] very strong and readable signals in Moscow! The system is working OK! Congratulation to Cosmonauts and German engineers! de Leo ua3cr@rk3kp."
[UA3CR/RV3DR]

/EX

Date: Sun, 28 Mar 1993 20:09:17 GMT
From: iris.mbvlab.wpafb.af.mil!blackbird.afit.af.mil!udecc.engr.udayton.edu!
udcps3!dmapub!apontej@uunet.uu.net
Subject: ANYONE MultiOP- Single Xmter CW WPX - W8BI?
To: info-hams@ucsd.edu

Anyone interested in qualifying to form a team to run a single xmter multioperator station in the dayton area.? Perhaps a possible station could be W8BI, if enough persons that qualify are interested & also can do some work to prepare for it... it may be possible to request the W8BI club station at dayton, ohio. At this time it is not necessary to be a member of DARA to use the station as a guest of some member, but in any event DARA membership is very reasonable, \$6/yr if u join in April would be good until July of 94. The station site has 3 towers, several beams, 10,15,20, 40 the 40 meter beam rotor is not functional at this time, but perhaps with some qualified operators interested that could be overcome. There is also a possibility to run multiple operator in the same band with a single xmter at the site sort of time division multiplexing the operators at different frequencies via remote control operation by controlling a single xmter (ft-990) remotely off the station grounds, of course a separate receiver could be used as a spotter

function by the multiplexed operator. Because of logistics & communications to control the equipment it would be desirable that this is a local geographic area. It is my understanding that 1993 CQ WW CW WPX rules do not disallow this setup for single xmter-multioperator category which also permits the use of packet cluster spotting functions. Please email me directly if u wish to discuss this idea further. It should be possible for a single xmter-multiOP in the US to match & surpass the world single single category or at least be in the top 10 point wise. Please feel free to put this bulletin in ur packet bbs if u wish. It may be proper to edit out the section about joining DARA to avoid any possible inference to solicitation. In any event it is not a solicitation but a way of making it easier to get the use of W8BI, that is if the majority of the group is a member....

my packet address is n8wpb@n8acv.#day.oh.usa.noam

hope to hear from some of you...

ps. please indicate what your level of interest is, amateur class license level, what equipment do you have that could perhaps be used, if you are local how far are u from this grid location em79ft, that is the present location from w8bi club station. if u perhaps have a better site also please let me know.

jose

n8wpb/ae

Date: 28 Mar 93 23:37:47 GMT

From: usc!wupost!spool.mu.edu!hri.com!opl.com!psinntp!psinntp!gdstech!gdstech!
bat@network.UCSD.EDU

Subject: feeding dipole with 300-ohm twinlead

To: info-hams@ucsd.edu

If you have a good matchbox, make the dipole as long as you can. Anything at 130' or so is great. Feed it with any twin lead you can (450 is a little better than 300 ohm line), and drive it with your matchbox. You will have a great antenna on any band. Especially if it has some altitude.

--

* Pat Masterson D12-25 | KE2LJ@KC2FD *
* Grumman Data Systems | 516-346-6316. *
* Bethpage, NY 11746 | bat@gdstech.grumman.com *

Date: Sun, 28 Mar 1993 22:33:43 GMT

From: usc!cs.utexas.edu!convex!siemens!siemens.com!dep@network.UCSD.EDU

Subject: FT-101B

To: info-hams@ucsd.edu

Date: Sun, 28 Mar 1993 08:50:06 EST
From: uunet.ca!xenitec!lemsys!clemon@uunet.uu.net
Subject: How to charge Gel-Cells
To: info-hams@ucsd.edu

Hello all, there is a possibility that I may come into possession of some _large_ gel cells (ie. in the order of a large lead-acid car battery in capacity) and I was wondering how gel-cells are charged... I know that NiCd (and NiMH I think) are charged by constant current, and that lead-acid types are charged by constant voltage. Are gel-cells also charged by constant voltage but have an upper limit on the charging current due to the gelled electrolyte? Can I get away with charging this on a relatively low-current lead-acid charger (10A)? What I would really appreciate is someone who could give me charging parameters in terms of C, the battery's capacity.

Thanks in advance,

--

Craig Lemon VE3XCL (Advanced) - clemon@lemsys.UUCP <-home-> +1 519 741 0297
SCHOOL: calemon@sunee.uwaterloo.ca | 1B Electrical Engineering
TCP/IP: ve3xcl@ve3xcl.ampr.org [44.135.84.51] | University of Waterloo
AX.25 Packet: ve3xcl@ve3euk.#SWON.ON.CAN.NA | Waterloo, Ontario, CANADA

Date: Sun, 28 Mar 1993 17:04:46 +0000
From: usc!howland.reston.ans.net!agate!doc.ic.ac.uk!marble.uknet.ac.uk!warwick!pipex!demon!wizard.demon.co.uk!paul@network.UCSD.EDU
Subject: ionosphere:post nuclear strike
To: info-hams@ucsd.edu

I am looking for information regarding the behaviour of the ionosphere and the earth's magnetic field after the explosion of one or more nuclear devices whether air or ground burst. Any data you can offer will be gratefully received. replies via email are preferred.

regards... Paul

--

Paul Hattemore {HF Radio Propagation Researcher}
Tel: +44 323 726630 | Wizard is a Private Internet Host |
E-Mail: [1] paul@wizard.demon.co.uk | running a dialup ppp connection to |
[2] 70374.1300@compuserve.com | Demon Internet Systems |

* Sic Itur Ad Astra * pgp public key available *

Date: Sun, 28 Mar 1993 13:27:03 GMT
From: usc!wupost!emory!wa4mei!ke4zv!gary@network.UCSD.EDU
Subject: Q values.
To: info-hams@ucsd.edu

In article <1295@arrl.org> zlau@arrl.org (Zack Lau) writes:

>I thought the Feb 1993 QEX p. 17 does a better job
>of explaining Q :-).

>

>Qu often refers to the unloaded Q--guess what the "u" refers
>to. This might be called the best possible Q--it takes into
>losses of real parts. Its not too practical, since it assumes
>that no power is extracted from the resonant circuit.

For many circuits, preamps, receiver frontends, etc this is a pretty close approximation since the parallel loading is quite light. For power output circuits, Qu is important only in judging how much loss will occur for **circulating** currents. A high loaded Q will increase circulating currents through the device loss resistances. So you would like the ratio Qu/Ql to be as large as possible to minimize these losses.

>Gary makes a mistake by differentiating series and
>parallel losses. Page 2-25 of the 1993 ARRL Handbook
>shows how to convert from a series circuit to its equivalent
>parallel circuit and vice versa.

I didn't make a mistake. I simply left it as an exercise to the reader to convert any parallel losses to their series equivalent as required by the Qu equation. Parallel losses in a two terminal parallel LC tank are minute anyway, only the leakage resistance of the capacitor. For an air variable that's negligible. The dominant loss is the series resistance loss of the coil.

>You usually want to extract power from a circuit, which
>decreases the Q of the circuit. Not surprisingly, if
>you want a very high circuit Q, most of the power gets
>lost in the components (remember the previous case, where
> **all** the power got lost in the components). Thus, for high
>efficiency, you want a very low circuit Q (relative to
>the Q of the parts).

Yep, I covered that.

>To avoid unnecessary flame wars, it might be useful to be
>more specific as to what you are referring to, assuming that
>you know the difference :-).

I think if you'll reread what I wrote a bit more carefully you'll find that I said exactly what you said, only better. I was careful to distinguish Q_u from Q_l and explain why. Apparently you didn't read past the opening sentence before flaming.

Gary

--

| | | | | |
|-----------------------------|--|--------------|--|--------------------------|
| Gary Coffman KE4ZV | | You make it, | | gatech!wa4mei!ke4zv!gary |
| Destructive Testing Systems | | we break it. | | uunet!rsiatl!ke4zv!gary |
| 534 Shannon Way | | Guaranteed! | | emory!kd4nc!ke4zv!gary |
| Lawrenceville, GA 30244 | | | | |

Date: 28 Mar 93 05:29:34 EST
From: usc!howland.reston.ans.net!agate!spool.mu.edu!enterpoop.mit.edu!
uhog.mit.edu!eddie.mit.edu!news.intercon.com!psinntp!arrl.org@network.UCSD.EDU
Subject: Q values.
To: info-hams@ucsd.edu

In rec.radio.amateur.misc, gary@ke4zv.uucp (Gary Coffman) writes:

>>

>> Q_u often refers to the unloaded Q --guess what the "u" refers
>>to. This might be called the best possible Q --it takes into
>>losses of real parts. Its not too practical, since it assumes
>>that no power is extracted from the resonant circuit.

Gary says>

>For many circuits, preamps, receiver frontends, etc this is a
>pretty close approximation since the parallel loading is quite
>light. For power output circuits, Q_u is important only in judging

The ARRL handbook recommends the Q_u/Q_l be at least 18 for preamps.
(the input matching circuit)

This results in a preamp with a noise figure of 0.5 dB *plus*
the noise figure of your device. Of course, if you wish to win
a noise figure contest these days, at least on the bands between
50 MHz and 10368 MHz, you really have to do a lot better. Often,
the ratio is more like 100. Its not unusual for the winning preamp
to have a noise figure *below* 0.4 dB.

It seems to me that manufacturers advertising low noise preamps

(< 1 dB NF) are loading down the tuned circuits quite heavily, minimizing the circulating losses.

Admittedly, people have gotten great results from undercoupled preamps tuned to cover 1 MHz, 100 kHz or even 10 kHz of an amateur band, but these tend to be exceptions.

BTW--At a VHF noise figure contest, someone brought a cavity 70 cm ATV preamp that he tuned up on the air. It had a pretty lousy noise figure, something like 3 or 4 dB. I suspect he tuned it so it rejected out of band interference, as it was later tuned for a much better better noise figure. Sometimes, it is better to sacrifice half a dB or even a dB of noise figure to reject out of band signals by an extra 20 dB+. Kent Britian figured this one out. Seems some Texans have trouble with FM broadcast getting into their 2 meter stations.

Gary will be able to point to examples such as crystal filters and Toko 2M bandpass filters with 6 or 8 dB of loss, but how many designers are really comfortable using these circuits?

Zack Lau KH6CP/1

Internet: zlau@arrl.org "Working" on 24 GHz SSB/CW gear
Operating Interests: 10 GHz CW/SSB/FM
US Mail: c/o ARRL Lab 80/40/20 CW
225 Main Street Station capability: QRP, 1.8 MHz to 10 GHz
Newington CT 06111 modes: CW/SSB/FM/packet
amtor/baudot
Phone (if you really have to): 203-666-1541

>how much loss will occur for *circulating* currents. A high loaded
>Q will increase circulating currents through the device loss resistances.
>So you would like the ratio Q_u/Q_l to be as large as possible to minimize
>these losses.
>

Date: Sun, 28 Mar 1993 17:20:23 GMT
From: usc!wupost!emory!kd4nc!ke4zv!gary@network.UCSD.EDU
Subject: Source For spools of wire
To: info-hams@ucsd.edu

In article <733251438.AA04764@tdkt.kksys.com>
Claton.Cadmus@f100.n282.z1.tdkt.kksys.com (Claton Cadmus) writes:
>John Stroppel wrote:
>

>JS>Have you tried the local telephone company. Some of the small town
>JS>companies junk the overhead copperweld when they put in underground.
>JS>I have gotten large spools of miles of this wire. john WA0VYZ
>
>John, I'm just curious but what does a telephone company use this wire
>for? I thought all the wire they strung was multi conductor stuff.

It is *now*, but many of the older telcos in RSAs used bare wires on glass insulators for each party line. Lines often had eight parties tied to them with different rings for each party. Some rural telcos even used a single overhead wire with an earth return, but that went out when REA started stringing electric service. A few systems still have bare copper on glass insulators. I saw such a system in rural Indiana last April.

Gary

```
--  
Gary Coffman KE4ZV          | You make it,      | gatech!wa4mei!ke4zv!gary  
Destructive Testing Systems | we break it.     | uunet!rsiatl!ke4zv!gary  
534 Shannon Way           | Guaranteed!      | emory!kd4nc!ke4zv!gary  
Lawrenceville, GA 30244   |                   |
```

Date: Sun, 28 Mar 93 21:49:17 GMT
From: mnemosyne.cs.du.edu!nyx!jmaynard@uunet.uu.net
To: info-hams@ucsd.edu

References <8amB03RVcebZ00@amdahl.uts.amdahl.com>,
<1993Mar27.171134.24054@ke4zv.uucp>, <1p39rr\$1lo@network.ucsd.edu>
Subject : Re: RFD: reorganization of rec.radio.amateur

In article <1p39rr\$1lo@network.ucsd.edu> brian@ucsd.edu (Brian Kantor) writes:
>Since the 1500+ people who are on the mailing lists can't vote anyway
>(no way to post to news.groups from the mailing list), we'll just have
>to wait and see.

They can vote, since all that's required is to send email to the vote-taker;
they can't (easily) participate in the discussion here in news.groups (where
I'm reading this message). I'm not sure what to do about that, either.

I would ask that you come to a conclusion one way or another, though, as
uncertainty over the effect on the mailing lists is going to be a serious
issue until then.

--
Jay Maynard, EMT-P, K5ZC, PP-ASEL | Never ascribe to malice that which can
jmaynard@oac.hsc.uth.tmc.edu | adequately be explained by stupidity.

"I can understand if it just won't work but I think locking up my system to tell me this is a little excessive." -- Steve Luzynski

Date: Sun, 28 Mar 1993 11:11:04 GMT
From: gsm001!gsm001.mendelson.com!gsm1rn@uunet.uu.net
To: info-hams@ucsd.edu

References <1993Mar24.164337.25413@hemlock.cray.com>,
<lorfe4INNonn@lester.appstate.edu>,
<930326.143818.6P5.rusnews.w165w@garlic.sbs.com>
Subject : Re: Help: study guide for 4A & 4B exams.

In article <930326.143818.6P5.rusnews.w165w@garlic.sbs.com> system@garlic.sbs.com (Anthony S. Pelliccio) writes:
>HOFFMANMK@CONRAD.APPSTATE.EDU (Marvin Hoffman) writes:

>I was surprised to see that in my local RS store. Sure, after I bought
>the ARRL book for the Advanced class and actually LEARNED the theory
>when I could've just done the rote memorization route. {sigh}
>
>Now if only they'd carry one for Extra, that'd be a trip. :)

The same books, by Gordon West, are availble mail order from several other sources. I think that they are more expensive than Radio Shack though.

I don't know if you read the text in the book, but if you pass a test using West's books, you can send him a copy of your Certificate of Succesful Completion and a SASE and he will send you a signed certificate suitable for framing and a some useful coupons. I got one for \$20 off any ICOM rig over \$200 and a discount on antennas.

I wish that they R/S had a codeless tech to general upgrade kit (general test book and 0-13 wpm code tapes). I passed the codeless tech and then bought the general kit (with 5-13 wpm tapes). I also had to buy the Novice kit to get the 0-13 wpm tapes.

Geoff.

--
Geoffrey S. Mendelson
(215) 242-8712
gsm@mendelson.com or uunet!gsm001!gsm

Passed Technician test!
(Ham Radio) 3/4/93

End of Info-Hams Digest V93 #387
